

Sun-Earth Day – Teaching Heliophysics Through Education Technology

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Sun-Earth Day (SED) is an Education and Outreach program supported by the U.S. National Aeronautics and Space Administration (NASA). The intent of the program is to teach students and the general public about Heliophysics (the science of the study of the Sun, how it varies, and how solar dynamics affect the rest of the solar system, especially the Earth). The program was begun ten years ago. Each year since that time a particular day has been designated as “Sun-Earth Day”. Usually the day of the spring equinox (March 20 or 21) is Sun-Earth Day, but other days have been used as well. Each year a theme is chosen relating to Heliophysics and events reflecting that theme are planned not only for Sun-Earth Day, but for the entire year.

From the very beginning educational technology was emphasized in the events in order to effectively reach wide audiences with the SED message. The main approach has been to have a “webcast” related to each year’s theme, often from a location that supports the theme as well. For example, a webcast took place from the Mayan pyramids at Chichen Itza, Mexico to highlight the theme of “Ancient Observatories, Timeless Knowledge”. Webcasts were not the only technology employed, however. Many of the themes centered on the dynamic nature of the Sun and the effects that solar storms can have on interplanetary space and in our day-to-day life on Earth. Activities for tracking when solar storms happen and how they affect the Earth were developed and brought together in an educational package called Space Weather Action Centers. This project is explained in more detail in another presentation in this session being given by Norma Teresinha Oliveira Reis.

Recent Sun-Earth Days have utilized “social networking” technologies to reach widespread groups on the internet. Podcasts, Vodcasts, Facebook, Twitter, and Second Life are the types of network technologies being employed now. The NASA Distance Learning Network is another method for bringing Sun-Earth Day events and training to widespread educators and classrooms in order to magnify the reach of Sun-Earth Day. Examples of the technologies will be shown along with an assessment of their effectiveness.